

10/575,120 /BAC/

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 AUG 10 Time limit for inactive STN sessions doubles to 40
minutes
NEWS 3 AUG 18 COMPENDEX indexing changed for the Corporate Source
(CS) field
NEWS 4 AUG 24 ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
NEWS 5 AUG 24 CA/Caplus enhanced with legal status information for
U.S. patents
NEWS 6 SEP 09 50 Millionth Unique Chemical Substance Recorded in
CAS REGISTRY
NEWS 7 SEP 11 WPIDS, WPINDEX, and WPIX now include Japanese FTERM
thesaurus
NEWS 8 OCT 21 Derwent World Patents Index Coverage of Indian and
Taiwanese Content Expanded
NEWS 9 OCT 21 Derwent World Patents Index enhanced with human
translated claims for Chinese Applications and
Utility Models
NEWS 10 NOV 23 Addition of SCAN format to selected STN databases
NEWS 11 NOV 23 Annual Reload of IFI Databases
NEWS 12 DEC 01 FRFULL Content and Search Enhancements
NEWS 13 DEC 01 DGENE, USGENE, and PCTGEN: new percent identity
feature for sorting BLAST answer sets
NEWS 14 DEC 02 Derwent World Patent Index: Japanese FI-TERM
thesaurus added
NEWS 15 DEC 02 PCTGEN enhanced with patent family and legal status
display data from INPADOCDB
NEWS 16 DEC 02 USGENE: Enhanced coverage of bibliographic and
sequence information
NEWS 17 DEC 21 New Indicator Identifies Multiple Basic Patent
Records Containing Equivalent Chemical Indexing
in CA/Caplus

NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items

Enter NEWS followed by the item number or name to see news on that
specific topic.

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for software development or design, implementation of commercial
gateways, or use of CAS and STN data in the building of commercial
products is prohibited and may result in loss of user privileges
and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 11:19:19 ON 31 DEC 2009

=> file reg

FILE 'REGISTRY' ENTERED AT 11:19:36 ON 31 DEC 2009

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 30 DEC 2009 HIGHEST RN 1199751-72-8

DICTIONARY FILE UPDATES: 30 DEC 2009 HIGHEST RN 1199751-72-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 26, 2009.

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10575120_fused_ring_20091231.str



ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24

ring bonds :

1-2 1-5 2-3 3-4 3-21 4-5 4-24 6-7 6-10 7-8 8-9 8-17 9-10 9-20 11-12

```

11-16 12-13 13-14 14-15 15-16 17-18 18-19 19-20 21-22 22-23 23-24
exact/norm bonds :
1-2 1-5 2-3 3-4 3-21 4-5 4-24 6-7 6-10 7-8 8-9 8-17 9-10 9-20 17-18
18-19 19-20 21-22 22-23 23-24
normalized bonds :
11-12 11-16 12-13 13-14 14-15 15-16

```

G1:C,O,S,N

Match level :

```

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom
22:Atom 23:Atom 24:Atom

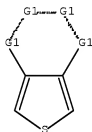
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L1 STRUCTURE UPLOADED

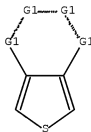
=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 C,O,S,N



Structure attributes must be viewed using SIN Express query preparation.

=> s l1 sss sam

SAMPLE SEARCH INITIATED 11:19:59

SAMPLE SCREEN SEARCH COMPLETED - 10665 TO ITERATE

18.8% PROCESSED 2000 ITERATIONS

4 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 207110 TO 219490

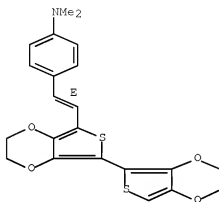
PROJECTED ANSWERS: 149 TO 703

L2 4 SEA SSS SAM L1

=> d scan 12

L2 4 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Benzenamine, N,N-dimethyl-4-[(1E)-2-(2,2',3,3'-tetrahydro[5,5'-
 bithieno[3,4-b]-1,4-dioxin]-7-yl)ethenyl]-
 MF C22 H21 N O4 S2

Double bond geometry as shown.

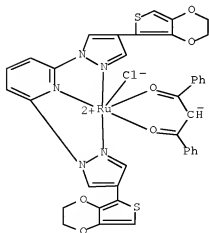


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

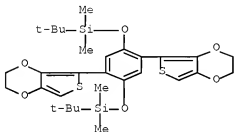
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):4

L2 4 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Ruthenium, [2,6-bis[4-(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-1H-
 pyrazol-1-yl-kN2]pyridine-kN]chloro(1,3-diphenyl-1,3-
 propanedionato-kO1,kO3)-, (OC-6-24)-, homopolymer
 MF (C38 H28 Cl N5 O6 Ru S2)x
 CI PMS

CM 1



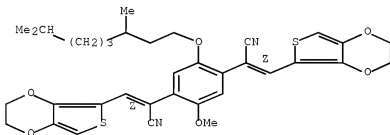
L2 4 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Silane, [[2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-1,4-phenylene]bis(oxy)]bis[(1,1-dimethylethyl)dimethyl- (9CI)
 MF C30 H42 O6 S2 Si2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 4 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Benzeneacetonitrile, 4-[(1Z)-1-cyano-2-(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)ethenyl]- α -[(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)methylene]-5-[(3,7-dimethyloctyl)oxy]-2-methoxy-, (α Z)-
 MF C35 H38 N2 O6 S2
 CI COM

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> log h

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 11:20:51 ON 31 DEC 2009

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

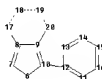
LOGINID:esptabac1774

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 11:22:14 ON 31 DEC 2009
FILE 'REGISTRY' ENTERED AT 11:22:14 ON 31 DEC 2009
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=>

Uploading C:\Program Files\Stnexp\Queries\10575120_fused_ringA_20091231.str



ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24
chain bonds :
10-12
ring bonds :
1-2 1-5 2-3 3-4 3-21 4-5 4-24 6-7 6-10 7-8 8-9 8-17 9-10 9-20 11-12
11-16 12-13 13-14 14-15 15-16 17-18 18-19 19-20 21-22 22-23 23-24
exact/norm bonds :
1-2 1-5 2-3 3-4 3-21 4-5 4-24 6-7 6-10 7-8 8-9 8-17 9-10 9-20 10-12
17-18 18-19 19-20 21-22 22-23 23-24
normalized bonds :
11-12 11-16 12-13 13-14 14-15 15-16

G1:C,O,S,N

Match level :

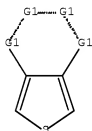
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom
22:Atom 23:Atom 24:Atom

L3 STRUCTURE UPLOADED

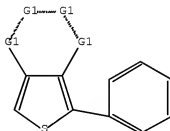
=> d l3

L3 HAS NO ANSWERS

L3 STR



G1 C,O,S,N



Structure attributes must be viewed using SIN Express query preparation.

=> s l3 sss sam

SAMPLE SEARCH INITIATED 11:22:40

SAMPLE SCREEN SEARCH COMPLETED - 2341 TO ITERATE

85.4% PROCESSED 2000 ITERATIONS

14 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 43918 TO 49722

PROJECTED ANSWERS: 85 TO 569

L4 14 SEA SSS SAM L3

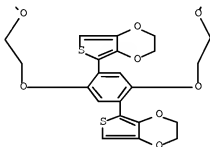
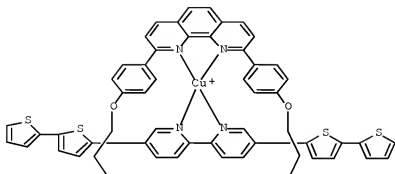
=> d scan l4

L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on SIN

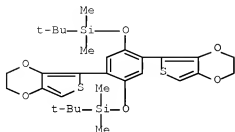
IN Copper(1+), [5,5'-bis([2,2'-bithiophen]-5-yl)-2,2'-bipyridine-
κN1,κN1'] [15,41-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-
8,9,11,12,19,20,22,23-octahydro-2,3,4:3,6:14,17:25,28:29,31-pentaetheno-
7,10,13,18,21,24,1,30-benzohexaoxadiazacyclodotriacontine-
κN1,κN30]-, (T-4)-, tetrafluoroborate(1-), homopolymer (9CI)

MF (C76 H58 Cu N4 O10 S6 . B F4)x

CI PMS



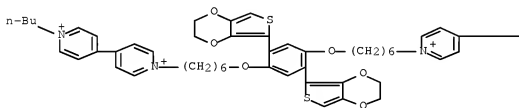
L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Silane, [[2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-1,4-phenylene]bis(oxy)]bis[(1,1-dimethylethyl)dimethyl- (9CI)
 MF C30 H42 O6 S2 Si2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN 4,4'-Bipyridinium, 1,1'-[2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-1,4-phenylene]bis(oxy-6,1-hexanediyl)]bis[1'-butyl-, bromide iodide (1:2:2)
 MF C58 H70 N4 O6 S2 . 2 Br . 2 I

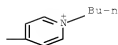
PAGE 1-A



● 2 Br⁻

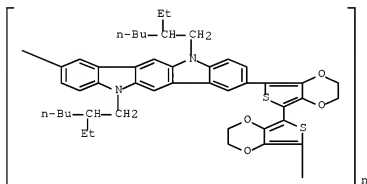
● 2 I⁻

PAGE 1-B

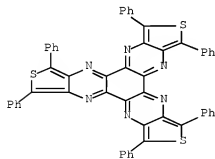


L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Poly[(5,11-bis(2-ethylhexyl)-5,11-dihydroindolo[3,2-b]carbazole-2,8-diyl)(2,2',3,3'-tetrahydro[5,5'-bithieno[3,4-b]-1,4-dioxin]-7,7'-diyl)]
 (9CI)
 MF (C46 H50 N2 O4 S2)n
 CI PMS

RELATED POLYMERS AVAILABLE WITH POLYLINK

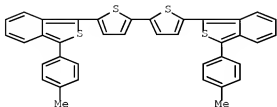


L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]bisthieno[3',4':5,6]pyrazino[2,3-f:2',3'-h]quinoxaline,
 1,3,6,8,11,13-hexaphenyl-
 MF C54 H30 N6 S3



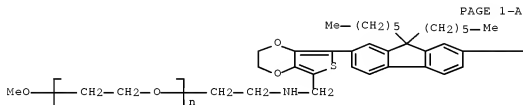
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Benzo[c]thiophene, 1,1'-[2,2'-bithiophene]-5,5'-diylbis[3-(4-methylphenyl)-
 MF C38 H26 S4

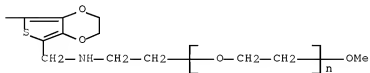


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Poly(oxy-1,2-ethanediyl), α,α' -[(9,9-dihexyl-9H-fluorene-2,7-diyl)bis[(2,3-dihydrothieno[3,4-b]-1,4-dioxin-7,5-diyl)methyleneimino-2,1-ethanediyl]]bis[ω -methoxy-
 MF (C2 H4 O) $_n$ (C2 H4 O) $_n$ C45 H60 N2 O6 S2
 CI PMS



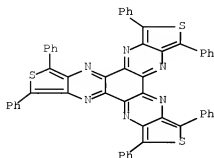
PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

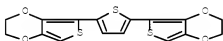
L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

IN Thieno[3,4-b]bisthieno[3',4':5,6]pyrazino[2,3-f:2',3'-h]quinoxaline,
 1,3,6,8,11,13-hexaphenyl-, radical ion(1-)
 MF C54 H30 N6 S3
 CI RIS

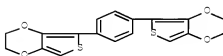


L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]-1,4-dioxin, 5,5'-(1,4-phenylene)bis[2,3-dihydro-, polymer
 with dichlorodioctylsilane and 5,5'-(2,5-thiophenediyl)bis[2,3-
 dihydrothieno[3,4-b]-1,4-dioxin]
 MF (C18 H14 O4 S2 . C16 H34 Cl2 Si . C16 H12 O4 S3)x
 CI PMS

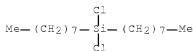
CM 1



CM 2



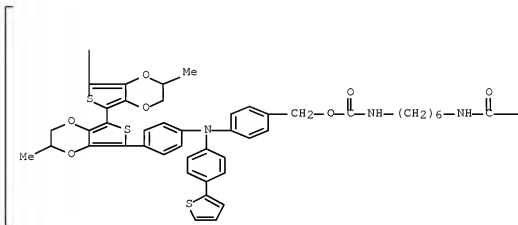
CM 3

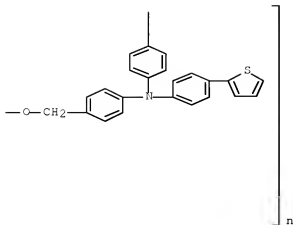


L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on SIN
 IN Poly[(2,2',3,3'-tetrahydro-2,2'-dimethyl[5,5'-bithieno[3,4-b]-1,4-dioxin]-
 7,7'-diyl)-1,4-phenylene[[4-(2-thienyl)phenyl]imino]-1,4-
 phenylenemethyleneoxycarbonylimino-1,6-hexanediyliminocarbonyloxymethylene-
 1,4-phenylene[[4-(2-thienyl)phenyl]imino]-1,4-phenylene]
 MF (C68 H60 N4 O8 S4)n
 CI PMS

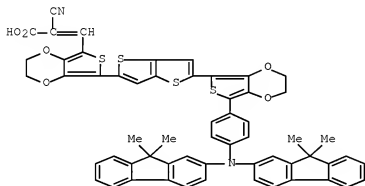
RELATED POLYMERS AVAILABLE WITH POLYLINK

PAGE 1-A



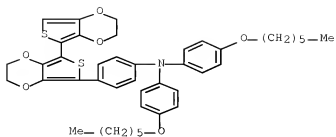


L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on SIN
 IN 2-Propenoic acid, 3-[7-[5-[7-[4-[bis(9,9-dimethyl-9H-fluoren-2-yl)amino]phenyl]-2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl]thieno[3,2-b]thien-2-yl]-2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl]-2-cyano-
 MF C58 H42 N2 O6 S4



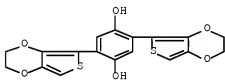
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on SIN
 IN Benzenamine, N,N-bis[4-(hexyloxy)phenyl]-4-(2,2',3,3'-tetrahydro[5,5'-bithieno[3,4-b]-1,4-dioxin]-7-yl)-
 MF C42 H47 N O6 S2

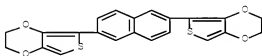


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN 1,4-Benzenediol, 2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-,
 homopolymer (9CI)
 MF (C18 H14 O6 S2)x
 CI PMS
 CM 1



L4 14 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2,6-naphthalenediyl)bis[2,3-dihydro-
 MF C22 H16 O4 S2
 CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> log h

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 11:23:36 ON 31 DEC 2009

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

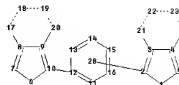
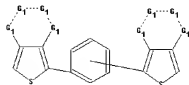
LOGINID:ssptabac1774

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 11:25:35 ON 31 DEC 2009
FILE 'REGISTRY' ENTERED AT 11:25:35 ON 31 DEC 2009
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=>

Uploading C:\Program Files\Stnexp\Queries\10575120_fused_ringB_20091231.str



ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
24
chain bonds :
10-12
ring bonds :
1-2 1-5 2-3 3-4 3-21 4-5 4-24 6-7 6-10 7-8 8-9 8-17 9-10 9-20 11-12
11-16 12-13 13-14 14-15 15-16 17-18 18-19 19-20 21-22 22-23 23-24
exact/norm bonds :
1-2 1-5 2-3 3-4 3-21 4-5 4-24 6-7 6-10 7-8 8-9 8-17 9-10 9-20 10-12
17-18 18-19 19-20 21-22 22-23 23-24
normalized bonds :
11-12 11-16 12-13 13-14 14-15 15-16

G1:C,O,S,N

Match level :

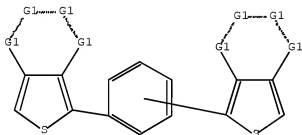
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom
22:Atom 23:Atom 24:Atom 28:Atom

L5 STRUCTURE UPLOADED

=> d l5

L5 HAS NO ANSWERS

L5 STR



G1 C,O,S,N

Structure attributes must be viewed using STN Express query preparation.

=> s l5 sss sam

SAMPLE SEARCH INITIATED 11:25:59

SAMPLE SCREEN SEARCH COMPLETED - 2341 TO ITERATE

85.4% PROCESSED 2000 ITERATIONS

5 ANSWERS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 43918 TO 49722

PROJECTED ANSWERS: 5 TO 262

L6 5 SEA SSS SAM L5

=> d scan l6

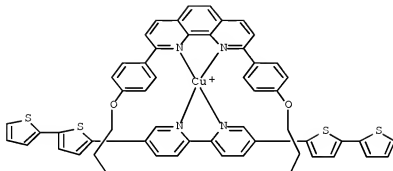
L6 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

IN Copper(1+), [5,5'-bis([2,2'-bithiophen]-5-yl)-2,2'-bipyridine-
kN1,kN1'] [15,41-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-
8,9,11,12,19,20,22,23-octahydro-2,34:3,6:14,17:25,28:29,31-pentaetheno-
7,10,13,18,21,24,1,30-benzohexaoxadiazacyclodotriacontine-
kN1,kN30]-, (T-4)-, tetrafluoroborate(1-), homopolymer (9CI)

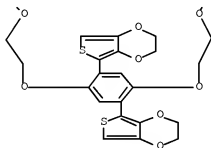
MF (C76 H58 Cu N4 O10 S6 . B F4)x
 CI PMS

CM 1

PAGE 1-A



PAGE 2-A



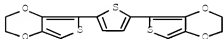
CM 2



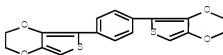
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):5

L6 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]-1,4-dioxin, 5,5'-(1,4-phenylene)bis[2,3-dihydro-, polymer
 with dichlorodioctylsilane and 5,5'-(2,5-thiophenediyl)bis[2,3-
 dihydrothieno[3,4-b]-1,4-dioxin]
 MF (C18 H14 O4 S2 . C16 H34 C12 S1 . C16 H12 O4 S3)x
 CI PMS

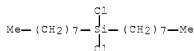
CM 1



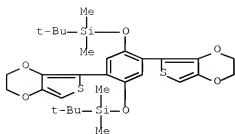
CM 2



CM 3

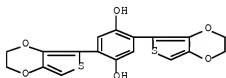


L6 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Silane, [[2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-1,4-
 phenylene]bis(oxy)]bis[(1,1-dimethylethyl)dimethyl- (9CI)
 MF C30 H42 O6 S2 Si2

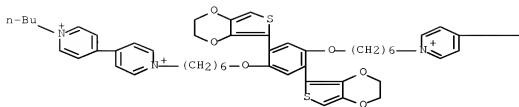
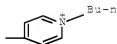


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L6 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN 1,4-Benzenediol, 2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-,
 homopolymer (9CI)
 MF (C18 H14 O6 S2)x
 CI PMS
 CM 1



L6 5 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN 4,4'-Bipyridinium, 1,1'-'-[2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-
 yl)-1,4-phenylene]bis(oxy-6,1-hexanediyl)]bis[1'-butyl-, bromide iodide
 (1:2:2)
 MF C58 H70 N4 O6 S2 . 2 Br . 2 I

●2 Br⁻●2 I⁻

ALL ANSWERS HAVE BEEN SCANNED

=> s l5 sss ful

FULL SEARCH INITIATED 11:26:35

FULL SCREEN SEARCH COMPLETED - 48188 TO ITERATE

100.0% PROCESSED 48188 ITERATIONS

133 ANSWERS

SEARCH TIME: 00.00.01

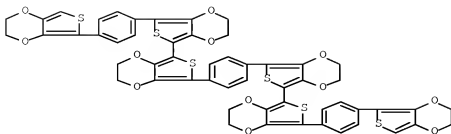
L7 133 SEA SSS FUL L5

=> d scan l7

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

IN 5,5'-Bithieno[3,4-b]-1,4-dioxin, 7,7'-(1,4-phenylene)bis[7'-[4-(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)phenyl]-2,2',3,3'-tetrahydro- (9CI)

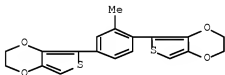
MF C54 H38 O12 S6



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):10

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-methyl-1,4-phenylene)bis[2,3-dihydro-
 (9CI)
 MF C19 H16 O4 S2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Poly[(2,2',3,3'-tetrahydro[5,5'-bithieno[3,4-b]-1,4-dioxin]-7,7'-diyl)[2,5-
 bis[[6-(1'-butyl[4,4'-bipyridinium]-1-yl)hexyl]oxy]-1,4-phenylene]
 tetrakis[hexafluorophosphate(1-)] (9CI)
 MF (C58 H68 N4 O6 S2)n . 4 F6 P

CM 1

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

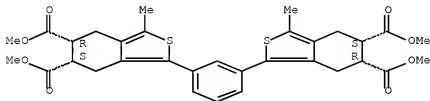
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

CM 2



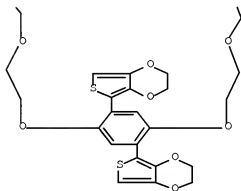
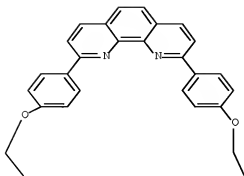
L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Benzo[c]thiophene-5,6-dicarboxylic acid,
 1,1'-(1,3-phenylene)bis[4,5,6,7-tetrahydro-3-methyl-, tetramethyl ester,
 [1(5'S*,6'R*),5a,6a]- (9CI)
 MF C32 H34 O8 S2

Relative stereochemistry.



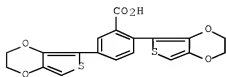
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN 2,34:3,6:14,17:25,28:29,31-Pentaetheno-7,10,13,18,21,24,1,30-
 benzohexaaxadiazacyclodotriacontine,
 15,41-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-8,9,11,12,19,20,22,23-
 octahydro- (9CI)
 MF C50 H42 N2 O10 S2
 CI COM



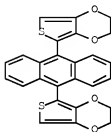
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Benzoic acid, 2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-
 MF C19 H14 O6 S2



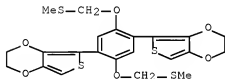
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]-1,4-dioxin, 5,5'-(9,10-anthracenediyl)bis[2,3-dihydro-
 MF C26 H18 O4 S2
 CI COM



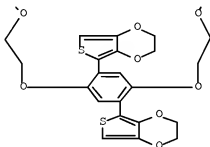
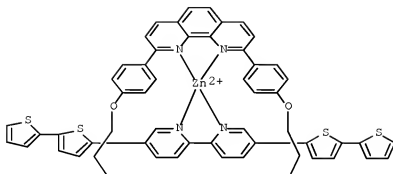
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Thieno[3,4-b]-1,4-dioxin, 5,5'-[2,5-bis[(methylthio)methoxy]-1,4-
 phenylene]bis[2,3-dihydro-
 MF C22 H22 O6 S4
 CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
 IN Zinc(2+), [5,5'-bis([2,2'-bithiophen]-5-yl)-2,2'-bipyridine-
 kN1,kN1'] [15,41-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-
 8,9,11,12,19,20,22,23-octahydro-2,34:3,6:14,17:25,28:29,31-pentaetheno-
 7,10,13,18,21,24,1,30-benzohexaoxadiazacyclodotriacontine-
 kN1,kN30]-, (T-4)-, diperchlorate (9CI)
 MF C76 H58 N4 O10 S6 Zn . 2 Cl O4

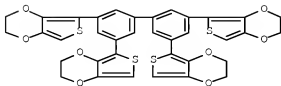


tetrayltetrakis[2,3-dihydro-, homopolymer (9CI)

MF (C36 H26 O8 S4)x

CI PMS

CM 1



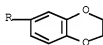
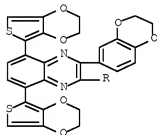
L7 133 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN

IN Quinoxaline, 2,3-bis(2,3-dihydro-1,4-benzodioxin-6-yl)-5,8-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-, homopolymer

MF (C36 H26 N2 O8 S2)x

CI PMS

CM 1



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 11:27:32 ON 31 DEC 2009

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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE LAST UPDATED: 30 Dec 2009 (20091230/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

HCAPLUS now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s 17

L8 69 L7

=> s 18 and ?lumines?

383139 ?LUMINES?

L9 10 L8 AND ?LUMINES?

=> s 18 not 19

L10 59 L8 NOT L9

=> dis 19 1-10 bib ab hitrn hitstr

L9 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2008:957278 HCAPLUS Full-text

DN 150:399026

TI A unique processable green polymer with a transmissive oxidized state for realization of potential RGB-based electrochromic device applications

AU Gunbas, Gorkem E.; Durmus, Asuman; Toppare, Levent

CS Department of Chemistry, Middle East Technical University, 06531, Turk.

SO Advanced Functional Materials (2008), 18(14), 2026-2030

CODEN: AFMDC6; ISSN: 1616-301X

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

OS CASREACT 150:399026

AB Realization of com. RGB-based polymer electrochromic-device applications can only be achieved by processable materials that possess three complementary colors in the reduced state and are transparent in the oxidized state. This report highlights the synthesis of the first processable green polymer with a transmissive oxidized state. The polymer revealed superior optical contrast in the visible region with fast switching times and robust stability. Hence, this material is the outstanding candidate for completion of RGB color space through com. polymeric electrochromics.

IT 1138217-20-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(monomer; unique processable green polymer with transmissive oxidized state for realization of potential RGB-based electrochromic device applications)

IT 1138217-22-7P

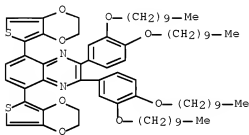
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(unique processable green polymer with transmissive oxidized state for realization of potential RGB-based electrochromic device applications)

IT 1138217-20-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(monomer; unique processable green polymer with transmissive oxidized state for realization of potential RGB-based electrochromic device applications)

RN 1138217-20-5 HCAPLUS

CN Quinoxaline, 2,3-bis[3,4-bis(decyloxy)phenyl]-5,8-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)- (CA INDEX NAME)



IT 1138217-22-7P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(unique processable green polymer with transmissive oxidized state for realization of potential RGB-based electrochromic device applications)

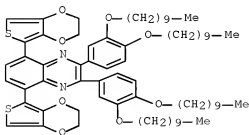
RN 1138217-22-7 HCAPLUS

CN Quinoxaline, 2,3-bis[3,4-bis(decyloxy)phenyl]-5,8-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-, homopolymer (CA INDEX NAME)

CM 1

CRN 1138217-20-5

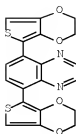
CMF C72 H102 N2 O8 S2



OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

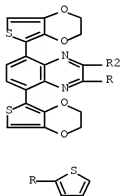
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:1272291 HCAPLUS Full-text
 DN 148:130600
 TI New, Highly Stable Electrochromic Polymers from
 3,4-Ethylenedioxythiophene-Bis-Substituted Quinoxalines toward Green
 Polymeric Materials
 AU Durmus, Asuman; Gunbas, Gorkem E.; Toppare, Levent
 CS Department of Chemistry, Middle East Technical University, Ankara, 06531,
 Turk.
 SO Chemistry of Materials (2007), 19(25), 6247-6251
 CODEN: CMATEX; ISSN: 0897-4756
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 148:130600
 AB Two new highly stable electrochromic polymers, poly(5,8-bis(2,3-
 dihydrothieno[3,4-b][1,4]dioxin-5-yl)-2,3-di(thiophen-2-yl)quinoxaline)
 (PDETQ) and poly(5,8-bis(2,3-dihydrothieno[3,4-b][1,4]dioxin-5-
 yl)quinoxaline) (PDEQ) were synthesized, and their potential use as neutral
 state green polymeric materials was investigated. Spectroelectrochem. showed
 that both polymers reveal two distinct absorption bands as expected for this
 type of donor-acceptor polymer, at 410 and 660 nm for PDEQ and 405 and 780 nm
 for PDETQ. The colorimetry anal. revealed that while PDEQ has a green-blue
 color, PDETQ showed a saturated green color in the neutral state which is a
 unique property of conjugated polymers for the completion of the RGB color
 system. Both polymers have excellent switching properties with satisfactory
 optical contrasts and very fast switching times. In addition, via both
 electrochem. and spectral analyses PDETQ was proven to be an n-type dopable
 polymer. Outstanding optical contrasts in the NIR region, perfect stability,
 and fast switching times make these polymers excellent candidates for many
 applications like smart windows and data storage technologies. It should be
 noted that PDETQ is one of the few examples of neutral state green polymeric
 materials in literature with a relatively transmissive oxidized state, high
 stability, and superior switching properties. Hence, PDETQ can be a paramount
 choice as a green polymeric material for display applications.
 IT 1000871-27-1P 1000871-28-2P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (stable electrochromic polymers from ethylenedioxythiophene-substituted
 quinoxalines for green color materials)
 IT 1000871-27-1P 1000871-28-2P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (stable electrochromic polymers from ethylenedioxythiophene-substituted
 quinoxalines for green color materials)
 RN 1000871-27-1 HCAPLUS
 CN Quinoxaline, 5,8-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)- (CA INDEX
 NAME)



RN 1000871-28-2 HCAPLUS
 CN Quinoxaline, 5,8-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-2,3-di-2-thienyl- (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (18 CITINGS)
 RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2007:911305 HCAPLUS Full-text
 DN 147:266976
 TI Organic semiconductive materials containing condensed polycyclic aromatic compounds, their films, devices, and thin-film transistors
 IN Katakura, Toshie; Okubo, Yasushi; Ozeki, Hidekane
 PA Konica Minolta Holdings, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 26pp.
 CODEN: JKXXAF
 DT Patent

LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------|------|----------|-----------------|----------|
| PI | JP 2007207967 | A | 20070816 | JP 2006-24293 | 20060201 |
| PRAI | JP 2006-24293 | | 20060201 | | |

OS MARPAT 147:266976

AB The materials contain condensed polycyclic aromatic compds. bearing LR (R = H, halo, substituent; L = alkenyl- or alkynyl-containing bivalent linkage) and having ≥ 2 C atoms belongings to 3 rings. The films, devices, and transistors show high carrier mobility and ON/OFF ratio, and good durability. The transistors are useful for organic electroluminescent displays.

IT 945829-37-8

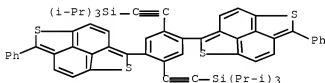
RL: TEM (Technical or engineered material use); USES (Uses)
(organic semiconductive materials containing condensed polycyclic aromatic compds. for thin-film transistors)

IT 945829-37-8

RL: TEM (Technical or engineered material use); USES (Uses)
(organic semiconductive materials containing condensed polycyclic aromatic compds. for thin-film transistors)

RN 945829-37-8 HCAPLUS

CN Naphtho[1,8-bc:5,4-b'c']dithiophene,
2,2'-[2,5-bis[2-(tris(1-methylethyl)silyl)ethynyl]-1,4-phenylene]bis[6-phenyl]- (CA INDEX NAME)



L9 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2006:538762 HCAPLUS [Full-text](#)

DN 145:53402

TI Light emitting element and electronic device using the same

IN Nomura, Ryoji; Seo, Satoshi; Abe, Hiroko; Takasu, Takako; Inoue, Hideko;

Ikeda, Hisao; Kumaki, Daisuke; Sakata, Junichiro

PA Semiconductor Energy Laboratory Co., Ltd., Japan

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|----------|-----------------|----------|
| PI | WO 2006059665 | A1 | 20060608 | WO 2005-JP22039 | 20051124 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

| | | | | |
|---------------------|----|----------|----------------|----------|
| JP 2006186337 | A | 20060713 | JP 2005-345057 | 20051130 |
| US 20090140634 | A1 | 20090604 | US 2006-575120 | 20060407 |
| KR 2007111451 | A | 20071121 | KR 2007-715020 | 20070629 |
| PRAI JP 2004-347693 | A | 20041130 | | |
| WO 2005-JP22039 | W | 20051124 | | |

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OS MARPAT 145:53402

AB A layer included in an electroluminescent element is required to be thickened to optimize light extraction efficiency of the electroluminescent element and to prevent short-circuit between electrodes. However, in a conventional element material, desired light extraction efficiency cannot be accomplished since drive voltage rises or power consumption is increased as the element material is thickened. A composite is formed by mixing a conjugated mol. having low ionization potential and a substance having an electron-accepting property to the conjugated mol. The conjugated mol. is selected from compds. of formula I (Y = arylene; X, Z = O, S, NR7, SiR8R9; R1-9 = H, aryl, aryl, etc.). A composite layer included in an element is formed using the composite as an element material. The composite layer is arranged between a first electrode and a light emitting layer or between a second electrode and a light emitting layer. The composite layer has high conductivity; therefore, drive voltage does not rise even if a film thickness is increased. Thus, an electroluminescent element which can prevent short-circuit of an electrode can be provided.

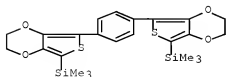
IT 811804-06-5P 811804-10-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic electroluminescent display device containing)

IT 168641-43-8
RL: TEM (Technical or engineered material use); USES (Uses)
(organic electroluminescent display device containing)

IT 811804-06-5P 811804-10-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic electroluminescent display device containing)

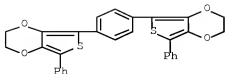
RN 811804-06-5 HCAPLUS

CN Silane, [1,4-phenylenebis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-7,5-diyl)]bis(trimethyl- (9CI) (CA INDEX NAME)

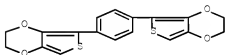


RN 811804-10-1 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(1,4-phenylene)bis[2,3-dihydro-7-phenyl- (CA INDEX NAME)]



IT 168641-13-8
 RL: TEM (Technical or engineered material use); USES (Uses)
 (organic electroluminescent display device containing)
 RN 168641-43-8 HCAPLUS
 CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(1,4-phenylene)bis[2,3-dihydro- (CA INDEX
 NAME)



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2005:227103 HCAPLUS Full-text
 DN 142:472477
 TI Intramolecular Photoinduced Charge Transfer in Rotaxanes
 AU Kwan, Phoebe H.; Swager, Timothy M.
 CS Department of Chemistry, Massachusetts Institute of Technology, Cambridge,
 MA, 02139, USA
 SO Journal of the American Chemical Society (2005), 127(16), 5902-5909
 CODEN: JACSAT; ISSN: 0002-7863
 PB American Chemical Society
 DT Journal
 LA English
 OS CASREACT 142:472477
 AB The authors report the synthesis and photophys. investigation of a series of
 rotaxanes in which the phys. confinement of the donor and acceptor (DA) pair
 leads, in some cases, to emissive exciplexes. As a comparison, the authors
 examined the photoinduced charge-transfer processes in the same DA mixts.
 under intermol. conditions. The interlocked configuration of the rotaxane
 facilitates π orbital overlap of the excited state DA pair by keeping their
 center-to-center distance extremely small. This increased interaction between
 the DA pair significantly lowers the activation energy for exciplex formation
 (E_a) and helps stabilize the highly polar charge-transfer complex. The
 authors find that the stabilizing effect of the rotaxane architecture
 compensates for the modest thermodyn. driving force for some charge-transfer
 interactions. In addition, the authors examined the temperature dependence on
 the rotaxanes' optical properties. Metal coordination to the tetrahedral
 cavity disrupts the cofacial conformation of the DA pair and quenches the
 fluorescence. Binding of alkali metal ions to the 3,4-ethylenedioxythiophene
 (EDOT)-based rotaxane, however, gives rise to the emergence of a new weak
 emission band at even lower energies, indicative of a new emissive exciplex.
 IT 851455-93-1P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(synthesis and photophys. of rotaxanes in which phys. confinement of donor acceptor pair may produce emissive exciplexes)

IT 263403-97-0

RL: PRP (Properties)

(threading unit; synthesis and photophys. of rotaxanes in which phys. confinement of donor acceptor pair may produce emissive exciplexes)

IT 851455-93-1P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)

(synthesis and photophys. of rotaxanes in which phys. confinement of donor acceptor pair may produce emissive exciplexes)

RN 851455-93-1 HCAPLUS

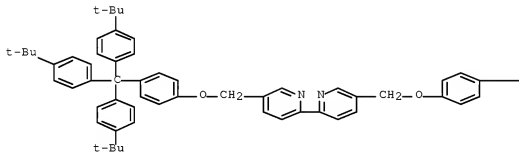
CN 2,34:3,6:14,17:25,28:29,31-Pentaetheno-7,10,13,18,21,24,1,30-benzohexaoxadiazacyclodotriacontine,
15,41-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-8,9,11,12,19,20,22,23-octahydro-, rotaxane compd. with 5,5'-bis[[4-[tris[4-(1,1-dimethylethyl)phenyl]methyl]phenoxy]methyl]-2,2'-bipyridine (1:1) (9CI)
(CA INDEX NAME)

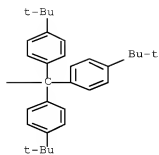
CM 1

CRN 742106-01-0

CMF C86 H96 N2 O2

PAGE 1-A

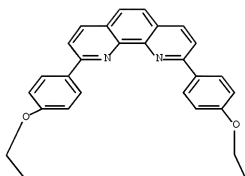


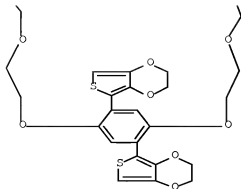


CM 2

CRN 263403-97-0

CMF C50 H42 N2 O10 S2





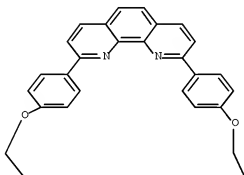
IT 263403-97-0

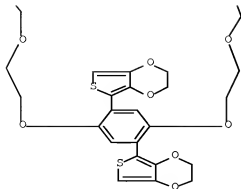
RL: PRP (Properties)

(threading unit; synthesis and photophys. of rotaxanes in which phys. confinement of donor acceptor pair may produce emissive exciplexes)

RN 263403-97-0 HCAPLUS

CN 2,34:3,6:14,17:25,28:29,31-Pentaetheno-7,10,13,18,21,24,1,30-benzohexaaxadiazacyclodotriacontine, 15,41-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)-8,9,11,12,19,20,22,23-octahydro- (9CI) (CA INDEX NAME)





OSC.G 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
 RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:1126916 HCAPLUS Full-text

DN 142:81994

TI Conjugated molecules and electroluminescent devices using them
 and electronic devices using the electroluminescent devices

IN Takasu, Takako; Yamazaki, Hiroko; Seo, Satoshi; Nomura, Ryoji; Inoue,
 Hideko

PA Semiconductor Energy Laboratory Co., Ltd., Japan

SO U.S. Pat. Appl. Publ., 24 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | US 20040258954 | A1 | 20041223 | US 2004-798410 | 20040312 |
| | US 7192535 | B2 | 20070320 | | |
| | WO 2005002288 | A1 | 20050106 | WO 2004-JP3101 | 20040310 |
| | W: | | | | |
| | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, | | | | |
| | CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, | | | | |
| | GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, | | | | |
| | LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, | | | | |
| | NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, | | | | |
| | TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: | | | | |
| | BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, | | | | |
| | BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, | | | | |
| | ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, | | | | |
| | SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, | | | | |
| | TD, TG | | | | |
| | EP 1605733 | A1 | 20051214 | EP 2004-719122 | 20040310 |
| | R: | | | | |
| | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, | | | | |
| | IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK | | | | |
| PRAI | JP 2003-70780 | A | 20030314 | | |
| | JP 2003-70806 | A | 20030314 | | |
| | WO 2004-JP3101 | W | 20040310 | | |
| OS | MARPAT 142:81994 | | | | |

AB Conjugated mols. are described by the general formula I (X and Z =
 independently selected O, S, or alkyl or arylene-substituted Si or N; Y = an

arylene group, a bivalent group with a C6-20 hydrocarbon aromatic ring or a bivalent C4-30 heteroarom. group including ≥ 1 of O, N, S, and Si; R1-4 = independently selected H, aryl, alkyl, cyano, dialkylamino, thioalkoxy, or alkoxy; and R5 and R6 = aromatic hydrocarbon, heteroarom. including ≥ 1 of O, N, S, and Si, alkyl, cyano, dialkylamino, thioalkoxy, or silyl group). The conjugated mols. may be used in a hole-injection layer, a hole-transporting layer, or a luminescent layer of an electroluminescent device. Electroluminescent devices employing the conjugated mols. with Y restricted to arylene groups and R1-6 to independently selected H, aryl, alkyl, cyano, dialkylamino, thioalkoxy, or alkoxy groups are also described, as are electronic devices employing the electroluminescent devices.

IT 168641-43-8

RL: DEV (Device component use); USES (Uses)

(conjugated mols. and electroluminescent devices using them and electronic devices using electroluminescent devices)

IT 811804-06-5P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(conjugated mols. and electroluminescent devices using them and electronic devices using electroluminescent devices)

IT 811804-10-1P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(conjugated mols. and electroluminescent devices using them and electronic devices using electroluminescent devices)

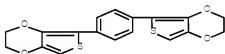
IT 168641-43-8

RL: DEV (Device component use); USES (Uses)

(conjugated mols. and electroluminescent devices using them and electronic devices using electroluminescent devices)

RN 168641-43-8 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(1,4-phenylene)bis[2,3-dihydro- (CA INDEX NAME)



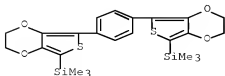
IT 811804-06-5P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

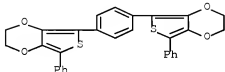
(conjugated mols. and electroluminescent devices using them and electronic devices using electroluminescent devices)

RN 811804-06-5 HCAPLUS

CN Silane, [1,4-phenylenebis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-7,5-diyl)]bis(trimethyl- (9CI) (CA INDEX NAME)

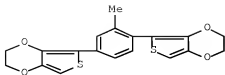


IT 811804-10-1P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (conjugated mols. and electroluminescent devices using them
 and electronic devices using electroluminescent devices)
 RN 811804-10-1 HCAPLUS
 CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(1,4-phenylene)bis[2,3-dihydro-7-phenyl-
 (CA INDEX NAME)]



OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
 RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2003:413393 HCAPLUS [Full-text](#)
 DN 139:140226
 TI Synthesis and characterization of novel photoluminescent
 bis[(3,4-ethylenedioxy)thien-2-yl] materials
 AU Pepitone, M. F.; Baiprasertsak, K.; Hardaker, S. S.; Gregory, R. V.
 CS NSF Center for Advanced Engineering Fibers and Films and Materials Science
 and Engineering, Clemson University, Clemson, SC, 29634, USA
 SO Synthetic Metals (2003), 135-136, 145-146
 CODEN: SYMEDZ; ISSN: 0379-6779
 PB Elsevier Science B.V.
 DT Journal
 LA English
 AB The authors report the synthesis of novel 3,4-ethylenedioxythiophene (EDOT)
 derivs. and the study of their photoluminescent properties. Synthesis of 2,5-
 bis[(3,4-ethylenedioxy)thien-2-yl]-Q derivs. were obtained by cross-coupling
 reactions using organopalladium and organonickel chemical, Knoevenagel
 condensations, and functional group interconversions for the hydrazide method.
 These materials exhibit blue to red emission characteristics with quantum
 yields ranging from 3.2-9.0%. Cyclic voltammetry shows oxidation potentials
 ranging from 422-617 mV. The prepared monomers may be used as optical
 building blocks in other unique polymer systems.
 IT 477587-15-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (BEDOT-TOL; synthesis and characterization of novel
 photoluminescent bis[(3,4-ethylenedioxy)thien-2-yl] materials)
 IT 477587-15-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (BEDOT-TOL; synthesis and characterization of novel
 photoluminescent bis[(3,4-ethylenedioxy)thien-2-yl] materials)
 RN 477587-15-8 HCAPLUS
 CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-methyl-1,4-phenylene)bis[2,3-dihydro-
 (9CI) (CA INDEX NAME)]



RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:211134 HCAPLUS [Full-text](#)

DN 139:52620

TI Synthesis and characterization of bis(EDOT)-aryl photoluminescent materials

AU Pepitone, Michael F.; Eairprasertsak, Kalya; Hardaker, Stephen S.; Gregory, Richard V.

CS School of Materials Science and Engineering, Clemson University, Clemson, SC, 29634, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2003), 44(1), 823-824
CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal; (computer optical disk)

LA English

OS CASREACT 139:52620

AB A symposium. Synthesis of four 3,4-ethylenedioxythiophene-achieved by organonickel, organopalladium, and a Na borohydride schemes with moderate to good exhibited blue emission characteristics with quant. 0.01% to 10.3%. Cyclic voltammetry was employed to characterize the electrochem. behavior of these systems. As expected, the monomers with alkyl and alkoxy groups had lower oxidation potentials with electron withdrawing groups. This work has increased the number of luminescent monomers available to use as building blocks in opto-electronic devices.

IT 548477-97-0P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and characterization of bis(EDOT)-aryl photoluminescent materials)

IT 477587-15-8P 548477-96-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization of bis(EDOT)-aryl photoluminescent materials)

IT 548477-95-8P

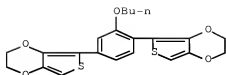
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(titanium trichloride reduction to luminescent aniline derivative; preparation and characterization of bis(EDOT)-aryl photoluminescent materials)

IT 548477-97-0P

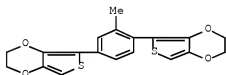
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and characterization of bis(EDOT)-aryl photoluminescent materials)

RN 548477-97-0 HCAPLUS

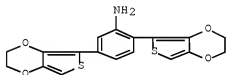
CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-butoxy-1,4-phenylene)bis[2,3-dihydro-(CA INDEX NAME)]



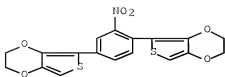
IT 477587-15-8P 548477-96-9P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation and characterization of bis(EDOT)-aryl photoluminescent
 materials)
 RN 477587-15-8 HCAPLUS
 CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-methyl-1,4-phenylene)bis[2,3-dihydro-
 (9CI) (CA INDEX NAME)



RN 548477-96-9 HCAPLUS
 CN Benzenamine, 2,5-bis(2,3-dihydrothieno[3,4-b]-1,4-dioxin-5-yl)- (CA INDEX
 NAME)



IT 548477-95-8P
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP
 (Preparation); RACT (Reactant or reagent)
 (titanium trichloride reduction to luminescent aniline derivative;
 preparation and characterization of bis(EDOT)-aryl photoluminescent
 materials)
 RN 548477-95-8 HCAPLUS
 CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-nitro-1,4-phenylene)bis[2,3-dihydro-
 (CA INDEX NAME)



RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2003:1635 HCAPLUS Full-text

DN 138:188109

TI Synthesis and Characterization of Photoluminescent
3,4-Ethylenedioxythiophene Derivatives

AU Pepitone, Michael F.; Hardaker, Stephen S.; Gregory, Richard V.

CS School of Materials Science and Engineering, Clemson University, Clemson,
SC, 29634-0971, USA

SO Chemistry of Materials (2003), 15(2), 557-563

CODEN: CMATEX; ISSN: 0897-4756

PB American Chemical Society

DT Journal

LA English

AB We report the synthesis of novel 3,4-ethylenedioxythiophene (EDOT) derivs. and the investigation of their photoluminescent properties. Lithiation of EDOT followed by the conversion to the 2-substituted zinc chloride or Grignard derivs. (useful for subsequent coupling reactions using organopalladium and organonickel chemical) led to the formation of 2,5-bis[(3,4-ethylenedioxy)thien-2-yl]-thiazole (1), 2,5-bis[(3,4-ethylenedioxy)thien-2-yl]-3-alkylthiophene (2, 3), and 2,5-bis[(3,4-ethylenedioxy)thien-2-yl]-toluene (4). The lithiated EDOT provided a route for the formylated species followed by a Knoevenagel condensation which led to the cyanovinylene derivs. 1,4-bis[1-cyano-2-[(3,4-ethylenedioxy)thien-2-yl]vinyl]benzene (5), 1,4-bis[1-cyano-2-[(3,4-ethylenedioxy)thien-2-yl]vinyl]-2,5-dimethoxybenzene (6). The lithated EDOT also provided a convenient method for preparation of 2,5-bis[(3,4-ethylenedioxy)thien-2-yl]-1,3,4-oxadiazole (12) by the hydrazide method. These materials exhibit blue to red emission characteristics with quantum yields ranging from 3.2 to 9.0%. Cyclic voltammetry shows oxidation potentials ranging from 422 to 617 mV. The prepared monomers may be used as optical building blocks in other unique polymer systems.

IT 477587-15-8P

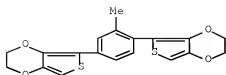
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization of photoluminescent
3,4-ethylenedioxythiophene derivs.)

IT 477587-15-8P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and characterization of photoluminescent
3,4-ethylenedioxythiophene derivs.)

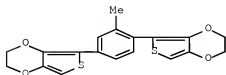
RN 477587-15-8 HCAPLUS

CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-methyl-1,4-phenylene)bis[2,3-dihydro-
(9CI) (CA INDEX NAME)



OSC.G 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)
 RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2009 ACS on STN
 AN 2002:624820 HCAPLUS Full-text
 DN 138:17769
 TI Novel photoluminescent materials based on
 3,4-ethylenedioxythiophene
 AU Pepitone, Michael F.; Hardaker, Stephen S.; Gregory, Richard V.
 CS Materials Science and Engineering, Clemson University, Clemson, SC, 29634,
 USA
 SO Polymer Preprints (American Chemical Society, Division of Polymer
 Chemistry) (2002), 43(2), 1164-1165
 CODEN: ACPPAY; ISSN: 0032-3934
 PB American Chemical Society, Division of Polymer Chemistry
 DT Journal; (computer optical disk)
 LA English
 AB Authors report the synthesis of BEDOT-3BT and BEDOT-3OT and others derivs. by
 a nickel chloride catalyzed Grignard cross-coupling reaction. The absorption,
 photoluminescence and cyclic voltammetry data for synthesized compds. are
 reported.
 IT 477587-15-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (novel photoluminescent materials based on
 3,4-ethylenedioxythiophene)
 IT 477587-15-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (novel photoluminescent materials based on
 3,4-ethylenedioxythiophene)
 RN 477587-15-8 HCAPLUS
 CN Thieno[3,4-b]-1,4-dioxin, 5,5'-(2-methyl-1,4-phenylene)bis[2,3-dihydro-
 (9CI) (CA INDEX NAME)



RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file stnguide

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